

Amendments to the Claims :

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Door [(8)] designed to be inserted between a cockpit [(4)] and a cabin [(6)] of an aircraft, said door [(8)] having a cockpit side [(8a)] and a cabin side [(8b)], characterised in that it comprises at least one trapdoor [(22)] capable of firstly closing off a passageway [(20)] provided through said door [(8)] and secondly of opening towards the cabin side [(8b)] of this door, the door [(8)] also comprising a mechanism [(30)] for locking / unlocking of the trapdoor [(22)] arranged on the cockpit side [(8a)] of the door [(8)] and capable of automatically unlocking the trapdoor [(22)] when the difference between a cockpit pressure corresponding to the air pressure applied against the cockpit side [(8a)] of said door [(8)] and a cabin pressure corresponding to the air pressure applied against the cabin side [(8b)] of said door [(8)], is greater than a predetermined value, characterised in that the locking / unlocking mechanism is mounted on the trapdoor of the door the locking / unlocking mechanism comprising:

- a secondary trapdoor comprising a first surface and a second surface, the first surface being subject to the cockpit pressure,

- a membrane defining a chamber and being provided with a first end and a second end, the first end being fixed to the second surface of the secondary trapdoor, and the second end being fixed to a portion of the trapdoor provided with at least one through orifice, at least a part of the second surface of the secondary trapdoor subjected to cabin pressure, and

means of transmission of movement connected firstly to the secondary trapdoor capable of moving when the cockpit pressure and the cabin pressure are different, and secondly to at least one bolt that cooperates with a trapdoor frame provided on the door and defining said passageway,

the secondary trapdoor comprising an upper end and a lower end, the lower end being connected hinged onto the trapdoor and the upper end being connectedly hinged to the movement transmission means.

2. (Currently Amended) Door [(8)] according to claim 1, characterised in that said predetermined value of the air pressure difference is such that it can generate a sufficient force on the trapdoor [(22)] to cause automatic opening of the unlocked trapdoor [(22)] towards the cabin side [(8b)] of said door [(8)].

3-5. (Currently Cancelled)

6. (Currently Amended) Door [(8)] according to claim [(5)] 1, characterised in that the movement transmission means for each bolt [(54)] in the locking / unlocking mechanism [(30)] includes:

- a connecting rod [(56)], provided with a first end [(56a)] and a second end [(56b)], the first end [(56a)] being connected hinged to the upper end [(52)] of the secondary trapdoor [(22)], and

- a sliding transmission rod [(58)] provided with a first end [(58a)] and a second end [(58b)], the first end [(58a)] being connected hinged to the second end [(56b)] of said connecting rod [(56)], and the second end [(58b)] being connected fixed to said bolt [(54)].

7. (Currently Amended) Door [(8)] according to claim 6, characterised in that for each bolt [(54)] in the locking / unlocking mechanism [(30)], the movement transmission means also comprise a guide bushing [(60)] fixed to the trapdoor [(22)] in said door [(8)], and inside which the transmission rod [(58)] is free to slide.

8. (Currently Amended) Door [(8)] according to claim 7, characterised in that each bolt [(54)] in the locking / unlocking mechanism [(30)] is fixed to a lever [(64)] that can be actuated in order to release said trapdoor [(22)] manually, a return spring [(66)] of the bolt [(54)] being arranged between said lever [(64)] and the guide bushing [(60)] of the movement transmission means.

9. (Currently Amended) Door [(8)] according to claim [(4)] 1, characterised in that the movement transmission means for ~~each~~ said at least one bolt [(54)] in the locking / unlocking mechanism [(30)] also include anti-acceleration means [(74)] designed to stop the movement of ~~the~~ a transmission rod [(58)] when the transmission rod is moving at a speed greater than a predetermined speed.

10. (Currently Amended) Door [(8)] according to claim [(4)] 1, characterised in that for each bolt [(54)] in the locking / unlocking mechanism [(30)], the movement transmission

means also comprise stop means [(90)] provided with an inertial mass [(92)] that can move automatically from a withdrawn position to a stop position, following a shock that occurs on the door [(8)] with an intensity greater than or equal to a predetermined intensity, so as to form a stop for a stop device [(98)] fixed to said bolt [(54)].

11. (Currently Amended) Door [(8)] according to claim [(4)] 1, characterised in that the locking / unlocking mechanism [(30)] also includes a balancing system [(84)] for the secondary trapdoor [(34)], said balancing system [(84)] being designed to prevent any movement of the secondary trapdoor [(34)] that could cause unlocking of this trapdoor [(22)] following a shock applied on said door [(8)].

12. (Currently Amended) Door [(8)] according to claim [(4)] 1, characterised in that the locking / unlocking mechanism [(30)] is protected by a protection cover [(32)] installed on the cockpit side [(8a)] on the trapdoor [(22)] in said door [(8)].

13. (Currently Amended) Door [(8)] according to claim [(4)] 1, characterised in that said the portion [(44)] of the trapdoor [(22)] provided with at least one through orifice [(46)] is covered by a filter [(68)] arranged on the cabin side [(8b)] of said door [(8)] and concealing the location of each orifice [(46)], said filter [(68)] being held in contact with the trapdoor [(22)] by a bullet-proof protection grill [(70)] assembled on said trapdoor [(22)].

14. (Currently Amended) Door [(8)] according to claim 13, characterised in that the bullet-proof protection grill [(70)] is assembled on the trapdoor [(22)] using a plurality of studs

[(72)] passing through said trapdoor [(22)], and that can only be disassembled from the cockpit side [(8a)] of said door [(8)].

15. (Currently Amended) Door [(8)] according to claim 1, characterised in that the trapdoor [(22)] comprises a lower part [(28)] provided with pivot hooks [(26)] designed firstly to hold the trapdoor [(22)] in a passageway [(20)] closing position when it locked, and secondly to enable pivoting of said trapdoor [(22)] towards the cabin side [(8b)] when it is unlocked.

16. (Currently Amended) Door [(8)] according to claim 1, characterised in that the trapdoor [(22)] comprises an upper part [(63)] provided with means [(62)] of retaining said trapdoor [(22)] in the passageway [(20)].

17. (Currently Cancelled)

18. (Currently Amended) Door [(8)] according to claim 1, characterised in that it comprises a main door body [(18)] and the trapdoor [(22)] that can be mounted on the main door body [(18)] in order to close off said passageway [(20)], the trapdoor [(22)] fitted with the locking / unlocking mechanism [(30)] being fully removable from the main door body [(18)].

19. (Currently Amended) Door [(8)] according to claim 18, characterised in that the main door body [(18)] and the trapdoor [(22)] are made from a bullet-proof material.

20. (Currently Amended) Door [(8)] according to claim 1, characterised in that the passageway [(20)] is sufficiently large to enable evacuation of personnel through said passageway [(20)].

21. (Currently Amended) Door system [(2)] designed to be inserted between a cockpit [(4)] and a cabin [(6)] of an aircraft, said system [(2)] comprising a doorframe [(12)] and a door [(8)] with a cockpit side [(8a)] and a cabin side [(8b)], the doorframe [(12)] being capable of partially covering the cabin side [(8b)] of said door [(8)] and preventing this door from being opened in any direction except towards the cockpit side [(8a)], characterised in that said door [(8)] is a door according to claim 1.

22. (New) Door designed to be inserted between a cockpit and a cabin of an aircraft, said door having a cockpit side and a cabin side, the door comprising:

at least one trapdoor capable of firstly closing off a passageway provided through said door and secondly of opening towards the cabin side, the trapdoor includes a locking / unlocking mechanism arranged on the cockpit side and capable of automatically unlocking the trapdoor when a difference between a cockpit pressure corresponding to the air pressure applied against the cockpit side of said door and a cabin pressure corresponding to the air pressure applied against the cabin side is greater than a predetermined value, the locking / unlocking mechanism mounted on the trapdoor and including:

- a secondary trapdoor comprising a first surface and a second surface, the first surface being subject to the cockpit pressure;

- a membrane defining a chamber and being provided with a first end and a second end, the first end being fixed to the second surface of the secondary trapdoor, and the second end being fixed to a portion of the trapdoor provided with at least one through orifice, wherein at least a part of the second surface of the secondary trapdoor is subjected to cabin pressure; and

- a transmission element coupled to the secondary trapdoor, wherein the transmission element is capable of being moved when the cockpit pressure and the cabin pressure are different, the transmission element coupled to at least one bolt that cooperates with a trapdoor frame provided on the door and defining said passageway, the locking / unlocking mechanism including an anti-acceleration element configured to stop the movement of a transmission rod when the transmission rod is moving at a speed greater than a predetermined speed.

23. (New) Door designed to be inserted between a cockpit and a cabin of an aircraft, said door having a cockpit side and a cabin side, the door comprising:

at least one trapdoor capable of firstly closing off a passageway provided through said door and secondly of opening towards the cabin side, the trapdoor includes a locking / unlocking mechanism arranged on the cockpit side and capable of automatically unlocking the trapdoor when a difference between a cockpit pressure corresponding to the air pressure applied against the cockpit side of said door and a cabin pressure corresponding to the air pressure applied against the cabin side is greater than a predetermined value, the locking / unlocking mechanism mounted on the trapdoor and including:

- a secondary trapdoor comprising a first surface and a second surface, the first surface being subject to the cockpit pressure;

- a membrane defining a chamber and being provided with a first end and a second end, the first end being fixed to the second surface of the secondary trapdoor, and the second end being fixed to a portion of the trapdoor provided with at least one through orifice, wherein at least a part of the second surface of the secondary trapdoor is subjected to cabin pressure, the portion of the trapdoor covered by a filter arranged on the cabin side of said door and concealing the location of each orifice, said filter being held in contact with the trapdoor by a bullet-proof protection grill assembled on said trapdoor; and

- a transmission element coupled to the secondary trapdoor, wherein the transmission element is capable of being moved when the cockpit pressure and the cabin pressure are different, the transmission element coupled to at least one bolt that cooperates with a trapdoor frame provided on the door and defining said passageway.

24. (New) Door designed to be inserted between a cockpit and a cabin of an aircraft, said door having a cockpit side and a cabin side, the door comprising:

- at least one trapdoor capable of firstly closing off a passageway provided through said door and secondly of opening towards the cabin side, the trapdoor includes a locking / unlocking mechanism arranged on the cockpit side and capable of automatically unlocking the trapdoor when a difference between a cockpit pressure corresponding to the air pressure applied against the cockpit side of said door and a cabin pressure corresponding to the air pressure applied against the cabin side is greater than a predetermined value, the locking / unlocking mechanism mounted on the trapdoor and including:

- a secondary trapdoor comprising a first surface and a second surface, the first surface being subject to the cockpit pressure,

- a balancing system for the secondary trapdoor configured to prevent any movement of the secondary trapdoor to avoid unlocking of the trapdoor following a external shock applied to said door;

- a membrane defining a chamber and being provided with a first end and a second end, the first end being fixed to the second surface of the secondary trapdoor, and the second end being fixed to a portion of the trapdoor provided with at least one through orifice, wherein at least a part of the second surface of the secondary trapdoor is subjected to cabin pressure; and

- a transmission element coupled to the secondary trapdoor, wherein the transmission element is capable of being moved when the cockpit pressure and the cabin pressure are different, the transmission element coupled to at least one bolt that cooperates with a trapdoor frame provided on the door and defining said passageway.

25. (New) Door designed to be inserted between a cockpit and a cabin of an aircraft, said door having a cockpit side and a cabin side, the door comprising:

at least one trapdoor capable of firstly closing off a passageway provided through said door and secondly of opening towards the cabin side, the trapdoor includes a locking / unlocking mechanism arranged on the cockpit side and capable of automatically unlocking the trapdoor when a difference between a cockpit pressure corresponding to the air pressure applied against the cockpit side of said door and a cabin pressure corresponding to the air pressure applied against the cabin side is greater than a predetermined value, the locking / unlocking mechanism mounted on the trapdoor and including:

- a secondary trapdoor comprising a first surface and a second surface, the first surface being subject to the cockpit pressure,

- a membrane defining a chamber and being provided with a first end and a second end, the first end being fixed to the second surface of the secondary trapdoor, and the second end being fixed to a portion of the trapdoor provided with at least one through orifice, wherein at least a part of the second surface of the secondary trapdoor is subjected to cabin pressure; and

- a transmission element coupled to the secondary trapdoor, wherein the transmission element is capable of being moved when the cockpit pressure and the cabin pressure are different, the transmission element coupled to at least one bolt that cooperates with a trapdoor frame provided on the door and defining said passageway, the transmission element including a stop element having an inertial mass configured to automatically move from a withdrawn position to a stop position following a shock that occurs on the door with an intensity greater than or equal to a predetermined intensity.